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The Influence of Spatial Scale and Scale-Sensitive Properties on Habitat Selection by American Marten

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Abstract

Ecological explanation exists at all hierarchical levels and spatial scales (Pickett et al. 1994). Thus, relying upon only a single level or scale of investigation limits ecological understanding. One reason for this is that a limited observation set underlies every data gathering process. *An observation set is* “the phenomena of interest, the specific measurements taken, and the techniques used to analyze the data” (O’Neill et al. 1986, Bissonette this volume). Every study is limited by inherent restrictions in the phenomena of interest (e.g., competition, predation), limitations in the kinds of measurements (e.g., population density, number surviving, longevity, fitness), and the specific techniques used to analyze the data (e.g., by hypothetico-deductive science). For example, at the population level, the processes of competition and predation can provide compelling mechanistic explanations for population persistence. At the same time, larger scale effects, involving differences in the relative proportions of available habitat, the frequency distribution of habitat patch sizes, and the degree of isolation of remnant patches from unfragmented habitat influence species’ responses and provide contextual explanation and understanding of the effects of larger scale landscape changes on those same species (Andr  n 1994).

Keywords

Home Range Habitat Selection Landscape Pattern Coarse Woody Debris Mature Forest

These keywords were added by machine and not by the authors. This process is experimental and the keywords may be updated as the learning algorithm improves.

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